Financing Higher Education in Sub-Saharan Africa: A Proposed Model Based on the Experiences of Ugandan Higher Education Institutions and Exemplary Practices from the Asian Tigers

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Abstract Financing higher education has become one of the most contentious educational issues in both developed and third world countries. Among the causes highlighted by researchers are changing fiscal policies and government resource allocation priorities, coupled with rapid increases in college-going populations. Today, there is an upsurge in the numbers of colleges and enrollments all over the world. This upsurge and the forces of globalization, which put demands on institutions in terms of international rankings and the need to adopt the latest technologies, are putting enormous fiscal pressure on higher education institutions and their funders. Increasing enrollments without sufficient funding lead to substandard facilities and a decline in academic standards. To close that funding gap, institutions have resorted to privatization, which includes (inter alia) tuition charges and other fees. This has effectively turned the traditional model of higher education upside down. The challenge is: How do universities ensure they admit only the most qualified students and provide them with the best instruction, using state-of-the-art facilities, in a learning system run by highly qualified and motivated faculty staff? Against that background, this chapter analyzes best practices for financing higher education in developing countries that have vibrant higher education sectors (such as Malaysia), together with the challenges, practices, and experiences of funding Ugandan higher education institutions. The chapter ultimately suggests a suitable framework for higher education financing in Uganda and similar sub-Saharan African countries.

Keywords Sub-Saharan Africa · Higher education · Asian Tigers

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Introduction

Today education is taken as a good for transforming human life in terms of civility, economic growth, capital development, and individual lives. Because it is a private good that is envisaged to change the entire human spectrum and the environment, many countries all over the world have invested immensely in this sector. For the above reasons, from the start of the twenty-first century onward, the higher education (HE) sector has realized a big influx of student enrollments. This kind of pressure has been put on these institutions because of increased demand from all levels, including individuals, groups, families, government, occupations, and social status (World Bank 2012). Since the economy of a country can be greater than the education of its people, it is evidenced that through higher education, people's mind-set and lives are improved. Also, societies become more harmonious because of civility, wisdom, exposure to approaches that are employed to handle conflicts. Economic strength and transformation become strong and steadily progressive because of the multiple skills and experiences that citizens of the given society are exposed to. Likewise, countries in Europe, Asia, and some parts of Africa that have invested highly in the higher education sector have not only developed their citizens but also gone on to spread their culture and influence to several regions of the world. For instance, China, Russia, and the USA have a lot of influence in the world order and its markets because they have graduates in influential positions all over the world. For these reasons, this chapter highlights ways through which higher education investment can be implemented to change the lives of African citizens, especially in Uganda.

The Problems

The university-going age group (18–30 years) is increasing in size. According to the Uganda Bureau of Statistics, this group constitutes about 20% of Uganda's population. Considering the rate of population growth, it will increase even further, considering because Uganda has the youngest population in the world, with children and adolescents (aged 0–18 years) constituting 55% of the population. This is coupled with efforts to democratize education and increase access at all levels. These have been in the form of (1) universal primary education (UPE), which has created opportunities for all children, regardless of their family incomes, to get access to primary education; and (2) and universal secondary education (USE), which has created opportunities for those who have completed primary education to continue with secondary education. The result is that there is an increased number of students who complete secondary education and desire to proceed with tertiary education. Whether they are of the preferred quality or not is beyond the main scope of this chapter.

This increase in demand for tertiary education, however, has come at a time of reduced government funding for higher education. Over the years, there has been an argument in favor of expanding public funding of basic education and leaving the burden of funding tertiary education to be carried by private individuals. Of course, in situations of limited resources, priorities have to be set.

Funding bottlenecks have been aggravated by reduced overseas support in the wake of the global financial crisis. This saw a reduction of budgetary support from overseas development funding across the board, education inclusive.

To make things worse, high levels of corruption mean that a significant portion of the meager resources available is siphoned off by unscrupulous officials at all levels of the education hierarchy, starting from the ministry all the way down to the department. This means that only a small portion of the allocated amounts actually reaches the target group or program.

Things are further complicated by the fact that the majority of the population is so poor that it is not feasible to use student fees alone as a source of income for universities. Most families are too poor to afford the actual budget cost of providing a quality education for their children.

Funding Problems

The net result of the scenario depicted above is that institutions of higher learning in Uganda, both public and private, are suffering from an acute shortage of funding. Having some degree of budgetary allocations and subsidies from the government while at the same time charging fees to students, public universities are doing better financially than their private counterparts (National Council for Higher Education 2014). Their situations are complicated only by archaic bureaucratic procedures and excessive political interference.

Funding problems have led to low enrollment and high dropout rates among the poor. Many capable students from poor families cannot afford to pay the tuition fees and living expenses charged by universities. Experts in higher education financing have identified a mechanism that a poor family uses to decide whether they should pay for higher education. The primary method is to conduct a cost–benefit analysis by determining how much the family will benefit from paying for one of its members to continue with higher education. This analysis considers not only the direct costs of higher education in the form of fees and living expenses but also the opportunity costs, or what the family will forego in terms of services and income earned by their son or daughter when he/she goes for further studies. In rural economies where children provide labor on farms, in homes, and in family businesses, this can be significant. Where resources are limited and the family has a number of children, the cost–benefit analysis will involve deciding who to sponsor for higher education and who should drop out and help the family. These are indeed very difficult decisions. Underlying this situation is what educational economists refer to as the liquidity problem, meaning that the family has limited cash resources.

This is exactly the case in the majority of Ugandan families, who (according to United Nations estimates) live on less than US$2 a day. To make things worse, the very few available scholarship programs are ostensibly given on merit and are not means tested. The net result is that they go to the children of the rich who can afford to attend expensive boarding schools and score the highest grades in national examinations.

Poor Facilities and Programs

In its many annual reports titled *The State of Higher Education,* the Ugandan National Council of Higher Education has consistently shown that the facilities at higher education institutions (HEIs), both public and private, are not adequate. In line with pressures arising from an increasing population and reduced funding, it is noticeable (except at a few private campuses) that the standard of facilities and infrastructure is less than desirable. There are not enough lecture rooms to accommodate the student populations in the popular courses, leading to overcrowding. For courses that require access to and use of information and communications technology (ICT) hardware and software, only outdated equipment and software are available most of the time. Hence, most of the learning is theoretical instead of practical. This is further complicated by the unavailability of the latest books and journals, especially in rapidly changing areas such as ICT. Internet access is very poor and networks are usually overloaded. Moreover, there is a dearth of science and technology labs and equipment, thereby making most of the learning theory based instead of practical. This, coupled with the fact that very few students take and pass science subjects in high school, hence leading to acute shortage of scientists and engineers in the country. Moreover, because of a lack of funds, universities are not capable of providing suitable on-campus accommodation for all students. As a result, many private hostels have sprung up, mostly lacking basic amenities and conducive learning environments (National Council for Higher Education 2014).

To make things worse, there is an acute shortage of qualified senior staff who have research experience and are capable of supervising quality research projects. A majority of the lecturers hold only bachelor's degrees, followed by master's degree holders. PhD holders are a minority. This has led to a situation whereby universities have been reduced to "overglorified high schools"—places where knowledge is consumed but not produced. Because of the shortage of staff, the few that are available are teaching at several institutions, a phenomenon referred to as moonlighting. When lecturers are busy moonlighting, we cannot expect them to give quality instruction to their students. This situation is worsened by the often poorly designed and archaic curricula at most of the institutions. Lecturers usually employ outdated instructional strategies they themselves inherited from their own lecturers (National Council for Higher Education 2014). In short, this system is not capable of producing graduates equipped with twenty-first century skills who are capable of functioning and being competitive in a modern, knowledge-based economy (Singh 2014).

While most Ugandan and other African scholars and administrators are fond of looking for solutions from the advanced countries of the West, in this chapter we propose that it is better to look at recently developed countries in Asia and Latin America. The reason for this is that the developed nations of Europe and America are so far ahead and have been developed for so long that it is unimaginable for poor countries such as Uganda to catch up with them. The story is different when it comes to recently developed countries such as the Asian Tigers. These countries were at the same level of development as Uganda and other African countries at the time of their independence. As a result of good leadership and enlightened setting of priorities, they have managed to get out of poverty.

The Experience in Malaysia

Southeast Asian countries achieved amazing levels of economic and social development especially in the 1990s, when the term "Asian Tigers" was coined. Countries that had started off lower than most African countries at the time of independence were now boasting of entering the middle-income range. Indeed, countries such as Singapore and South Korea are now among the high-income countries (OECD/Asian Development Bank 2015). Since it is difficult to do justice to this topic by studying the mechanisms of financing of higher education in all Southeast Asian countries, we have decided to focus on Malaysia (for studies of the entire region, see Marginson et al. (2011) and Armstrong and Chapman (2011). In terms of social and economic development, Malaysia is neither too high nor too low. Thus, it is easier to imagine how to implement the Malaysian model in an African country such as Uganda. Moreover, like Uganda, Malaysia was colonized by Britain; thereby, both countries share a common colonial legacy. It is believed that at the time of Uganda's independence in 1962, the two countries were almost equal in all aspects.

Without delving into the history of Malaysia and how it ended up having the system it has today, we will summarize the structure of higher education financing in Malaysia. In comparison with neighboring countries such as Indonesia, the Malaysian system is very much dominated by the public sector (Armstrong and Chapman 2011; Regel et al. 2007; Sirat 2010). Even developments in the private sector are, by and large, facilitated by progressive government policies. The main thrusts of funding mechanisms for higher education are in the form of federal government funding, government-linked companies (parastatals), state government initiatives, the private sector, and religious institutions.

Federal Government Funding

Most of the financing for higher education institutions has been dominated by the public sector (Wilkinson and Yussof 2005). The main form of funding provided

by the government is in the form of land grants, whereby public universities are allocated land by the federal government for constructing campuses and other required facilities. Additionally, public universities are allocated funds for constructing campuses and other required facilities such as ICT infrastructure. These major expenses are usually allocated in the 5-year development plans of the country, as well as in the annual budgets. The Malaysian federal government spends billions of dollars annually on this item (Regel et al. 2007; Sirat 2010).

Another important expense borne by the federal government is the recurrent or operating expenditure of universities. The Malaysian federal government used to cover all of the operating costs of universities, including salaries, emoluments, and other overheads. However, the government has recently required all public universities to generate at least 30% of their total recurrent expenditure. Many public universities are dealing with this through strategic investments and provision of training and consultancy services, as well as imposition of tuition fees (Ahmad et al. 2013; Sirat 2010).

The requirement by the federal government for universities to generate at least 30% of their operating budgets has made many of them think outside the box. Many of them are trying to do so through the traditional channels of research and consultancy, with investments in providing specialized services to the public, especially in the area of health (e.g., the UM (University of Malaysia) Medical Center, UKM (Universiti Kebangsaan Malaysia/National University of Malaysia) Hospital, and IIUM (International Islamic University Malaysia) Specialist Hospital). Some universities have ventured into serious business investments—for example, IIUM Holdings, which includes a trading arm (IIUM Trading), a preschool education arm (IIUM Montessori), two elementary schools, two secondary schools, a high school, and a private diploma- and degree-awarding college. Moreover, universities, either alone or in partnership with private companies, have established learning centers in Malaysia and abroad, offering their courses to students whose work or family commitments would otherwise make it difficult for them to enroll. This has increased opportunities for people to enroll in higher education while contributing to the universities' income. Most of these courses are offered in an executive mode, which attracts more fees than the normal mode. Such programs include the UTM (Universiti Teknologi Malaysia/Malaysian University of Technology) School of Professional and Continuing Education (SPACE), the IIUM Center for Continuing Education (ICCE) and Center for Strategic Continuing Education and Training (CRESCENT), and the UM Center for Democracy and Elections (UMCEDEL).

Another mechanism for funding institutions of higher learning is through research grants. The federal government offers research grants in strategic areas through the Ministry of Education (MOE) and the Ministry of Science, Technology and Innovation (MOSTI). MOE runs the highly competitive Fundamental Research Grant Scheme (FRGS), which is open to all institutions of higher learning. MOSTI awards two main grants (through the E-Science Fund and the E-Techno Fund) aimed at generating basic ideas in science and technology, and developing those innovations to the stage of commercialization. Through these grants, successful

researchers generate additional funds for themselves and their graduate students, and acquire the latest equipment for their universities.

To encourage competition in research activities, the federal government has introduced the Research University (RU) status, a competitive program whereby public universities are assessed in terms of their research capacity and outputs. Institutions that fulfill the requirements for RU status are given an extra research budget allocation (US$10–20 million per annum) over and above their usual development and operating budgets. As of now, five universities have attained that status: UM, UKM, UTM, USM (Universiti Sains Malaysia/Malaysian University of Science), and UPM (Universiti Putra Malaysia/Putra University of Malaysia). The federal government has also set up several world-class research and innovation centers of excellence in different strategic areas, such as the Malaysian Agricultural Research and Development Institute (MARDI) within UPM.

For the past 10 years, the government has focused on improving standings in international rankings—the most important indicator being the number of publications in top journals indexed in Scopus and the World of Science/ISI (International Scientific Indexing) indexes. In addition to requiring research universities to produce a specified number of high-ranking publications, all other universities are ranked on the basis of their research and publications. Most non-research universities give incentives of about US$500 per paper published in an indexed journal.

In addition to research and publication output, other quality assurance measures have been put in place and funded by the federal government. These include supervision by the Malaysian Qualifications Agency (MQA). All public and private institutions are judged by the same standards. A star ranking system is used for all public and private institutions under the Malaysia Research Assessment Instrument (MyRA) and Rating System for Malaysian Higher Education Institutions (SETARA) frameworks. Most institutions have International Standards Organization (ISO) quality assurance certification to ensure that all programs, facilities, and processes are managed at international standards. Part of this process is the use of outcome-based management. Universities have adopted the Balanced Score Card system, which requires setting of clear key performance indicators (KPIs) whereby everyone (leaders, administrators, and faculty members) is accountable for achieving his/her KPI. These measures have a real impact on annual salary increments, promotions, renewal of contracts, and other entitlements (Wilkinson and Yussof 2005).

As expected, one of the main avenues of higher education funding is through provision of scholarships. The Malaysian federal government gives a combination of merit and needs-based scholarships. Top performers in the national high school examinations are given Jabatan Perkhidmatan Awam/Public Service Department (JPA) scholarships whereby they are sent to the top universities in the world. Upon graduation they are expected to serve in various government departments, depending on their specialization. In addition to the JPA scholarships, there are affirmative action scholarships under the Majlis Amanah Rakyat/People's Trust Council (MARA), which are mainly targeted toward indigenous students from poor families. They are sent to boarding schools in the country where they can access

good facilities and excellent tuition. Upon successfully completing high school, the best are given scholarships or convertible loans to pursue higher education at universities of their choice outside Malaysia and domestically. Convertible loans are loans that are converted into scholarships if the student attains a first-class degree (Tham 2011; Sirat 2010).

In 1998, Malaysia established a higher education loan fund for all Malaysians regardless of ethnicity, religion, or location. Every student can apply. However, the board considers each applicant's parents' incomes to decide on the amount to be given. Some students get 100% of the amounts they apply for, while others are given only a percentage. After graduating and securing a job, the borrower is then expected to make scheduled monthly payments (Regel et al. 2007; Ahmad et al. 2013). As expected in programs of this nature, there have been teething problems, with many borrowers refusing to pay after they graduate. In response to this, the government has introduced tough measures, including barring defaulters from leaving the country. This program has helped many Malaysians to access higher education (Ismail and Fadzim 2009).

On the capacity development side, the federal government provides funds for universities to send their academic staff for further studies in good universities overseas. Some of the funds are specifically reserved for affirmative action for indigenous staff, especially those from poor families. As a result of this, most of the academic staff of public universities have doctoral degrees from good universities abroad.

To further encourage the development of higher education, the government gives incentives to government-linked companies and the private sector to establish higher learning institutions. These are discussed in the following sections.

The Role of State Governments

Malaysia is a federation composed of 14 states. Most of the affairs related to education are centralized under the federal Ministry of Education. State education departments are directly answerable to the federal ministry. Nevertheless, most of the state governments have put measures in place to help citizens of those states to access higher education. The most common approach has been provision of scholarships and loan schemes for their citizens. Under this arrangement, state governments or foundations under the state governments offer scholarships or loans for their citizens who fail to secure funding under federal arrangements. Recently, some states have ventured into higher education by establishing state universities. For example, the state of Selangor has established Kolej Universiti Selangor/Selangor University College, the state of Perak has established Sultan Azlan Shah University, and the State of Kedah has established Insaniah University.

Moreover, in Malaysia, all matters of religion are the prerogative of state governments. Islam is the religion of the state and the traditional ruler (the Sultan) is the head of religion in the state. Religious institutions usually offer funding to higher

education in the form of *awqaf* (endowments), scholarships, and other short-term funding for students who qualify (Ismail and Fadzim 2009; Aziz et al. 2013).

The Role of Government-Linked Companies

The Malaysian government fully owns or has controlling stakes in many large publicly listed companies operating in a number of strategic areas. These include the national oil company (Petronas), the national electricity company (Tenaga Nasional), the Malaysian telecommunications company (Telekom Malaysia), some of the major banks (e.g., Malayan Banking Berhad), the railway company (Keretapi Tanah Melayu Berhad (KTMB), and Malaysian Airlines. Most of these companies have centers for training their staff. In the 1996 educational reform whereby Malaysia decided to become a regional higher education hub, the Malaysian federal government encouraged most of the government-linked companies to transform their training centers into fully fledged private universities (Wilkinson and Yussof 2005). At present, Petronas owns Petronas University of Technology (UTP), Telekom Malaysia owns Multimedia University (MMU), and Tenaga Nasional owns Tenaga Nasional University (UNITEN). These are among the top private universities in the country, educating many local students at subsidized rates and with a large percentage of foreign students paying full fees (Regel et al. 2007; Sivalingam 2007).

In addition to establishing their own institutions of higher learning, government-linked companies contribute to the finances of higher learning in other ways. Most companies have scholarship schemes for specific populations, and most of them offer scholarships for potential future staff. Others help students from rural areas. There is a new trend of major corporations sponsoring entire departments or helping to construct buildings on campuses or even to finance professorial chairs named after those organizations. Some government-linked companies such as the Federal Land Development Authority (FELDA), the Palm Oil Research Institute (PORIM), and the Rubber Research Institute (RRI) have established state-of-the-art research and development facilities, which they often share with researchers in universities.

The Role of the Private Sector

Prior to the 1996 higher education reforms, the role of the private sector in higher education was mainly in the form of giving scholarships and other financial support to students to pursue further studies in Malaysia and abroad. Private entities such as Star Publications, the Sunway Group, the Genting Group, and the Berjaya Group used to offer scholarships every year to students who qualified for admission to good universities but were unable to meet the costs. A small number of companies operated commercial and technical colleges, mostly offering professional qualifications (such as the Association of Chartered Certified Accountants (ACCA) and

the Chartered Institute of Management Accountants (CIMA). Some colleges started operating twinning programs whereby students would spend 1 or 2 years of their course in Malaysia and the remainder in a foreign country such as the UK, the USA or Australia, thereby saving on the total cost of the degree while acquiring a highly coveted foreign qualification (Lee 2004; Tham 2011).

As part of the 1996 higher education reforms, the Malaysian government decided to become a global player in the higher education market, with the private sector being a major driver. When the government announced its aspiration to have at least 100,000 foreign students by 2010, with each of them paying US$10,000 in tuition fees and spending an equal amount on living expenses, many analysts thought it was a joke (Wilkinson and Yussof 2005; Lee 2004; Sivalingam 2007). However, by 2012, Malaysia had more than 100,000 foreign students. The Higher Education Strategic Plan (2013–2025) then announced its goal of having 200,000 foreign students in the country by 2020. Most of these foreign students are enrolled in private universities and colleges whose main source of income is tuition fees. The expansion of this sector shows that Malaysia is collecting a good amount of revenue from this source. Building upon this success, some of the Malaysian private universities have started establishing branches in other countries (e.g., the Limkokwing University campuses in South Africa, China, and the UK). As we write this, private higher education in Malaysia continues to expand at a rapid pace (Wilkinson and Yussof 2005; Regel et al. 2007; Sirat 2010).

It is evident from the foregoing that the Malaysian federal government has taken the lead in financing higher education, as is the case in Uganda and other African countries. What is different is the monetary amounts involved and the mechanisms that have been used. Starting with the traditional government-dominated model of financing, Malaysia has progressively diversified its funding model, leading to a public–private partnership model and fair competition between public institutions of higher learning and private ones. This has led to rapid development of higher education in terms of both quantity and quality. Targeted spending on staff development, infrastructure, and research grants has tremendously improved the potential of Malaysia's higher education human resources. While most African universities are bottom heavy, with very few PhD holders and often no professors, in Malaysia it is not uncommon to find departments with more professors and associate professors than staff of other ranks. This, coupled with progressive incentives and funding for research and publications, is gradually pushing Malaysia's academics to be among the best in their fields.

Lessons for Uganda and Other African Countries

To contribute significantly to economic growth and social development as a whole, governments should offer grants from their national budgets to institutions of higher education. This is because the driving forces of the globalized knowledge economy and its market are centered on the system of education, through which learners

are exposed to skills and new technologies to enhance new developments for providing solutions to human challenges. However, this kind of input in terms of grants cannot be of great importance if learners do not have access to standardized facilities and efficient use of available resources. In Asia, governments provide grants to both private and public universities for the production of needed human resources, at the same time equipping their countries with the necessary skills to address their social and economic challenges. Facilities such as high-speed internet, high-tech computers, and standardized lecture rooms are in place, in addition to what lecturers are offered to carry out research (Ahmad et al. 2012). Furthermore, those lecturers work in a conducive and quiet atmosphere and, at the same time, are offered reasonable incentives and facilitation to encourage their research and collaboration. However, in Uganda the situation seems not to be at a level of high expectations although the government is envisaging middle-income generation by 2040. To achieve this strategy, the government must work hand in hand with higher education institutions to ensure that the exposure of their students to knowledge and skill rhymes with the needs of the time to catch up with giant countries such as China and Japan. Those countries invest most of their budgets in production of highly skilled human resources and thus stand greater chances of filling all of the necessary gaps in the world market (Welch 2016). In Uganda, for instance, higher education institutions are challenged with brain drain, moonlighting, and lack of knowledge creation and generation, which can be attributed to the poor remuneration and fringe benefits that staff are given. With low salaries and lack of grants and conducive environments for working, lecturers cannot settle and do reasonable work to change the society and generate economic development (Cloete and Maasen 2015; Kasozi 2014; Miiro et al. 2016).

In addition, governments may fund higher education institutions through loans to boost their megadevelopments. For instance, institutions that have survived for years not only have secured loans to run their budgets but also have been able to put up structures through endowments to strengthen their economic viability. Dependence on tuition fees has not only disadvantaged students but also stalled many university activities because in Uganda, many students come from poor families; therefore, to raise funds at once to pay for tuition charges is always complicated. Meanwhile, in other parts of the world, higher education institutions get 60% of their budget funding from the government and the rest is fulfilled by the institutions. For example, in China the funding system has been diversified whereby the state does not take charge of its supervision; rather, the government offers mixed grants and commodification of tuition fees comes as a supplement for university activities (Ahmad et al. 2012).

In Asian countries, governments fund staff development programs for all institutions. This is done by sending staff with different specializations to highly ranked universities all over the world. After completion of their studies, the staff are bonded and, at the same time, paid highly to motivate them to carry out government projects while teaming up to come up with innovative ideas, strategies, and policies that can enhance teaching, learning, research, and publication. Through this strategy, many

governments have more than enough human resources to address the challenges of all kinds that may befall their nations.

In addition, students are entitled to government loans to ensure that there is no socioeconomic gap between different states, especially in Malaysia. Along the same lines, students fees are regulated by the government; therefore, universities cannot raise their tuition fees. Meanwhile, students who are given government funds are normally bonded after their studies, so the state treasury recovers its investment in those students and can then use that money for funding of new generations and other applicants.

In countries such as Uganda, students who enroll in these institutions depend on soliciting funding for their studies from relatives, friends, and good Samaritans. This kind of situation can be attributed to the increased level of poverty, economic volatility, economic gaps between families, and increased competition for national funding. It is therefore imperative that governments and other stakeholders take charge and rethink their strategies for helping students to acquire more useful education to change the economies of their countries. For instance, countries that invest in human capital all over the world stand greater chances of earning both economic and noneconomic benefits. For instance, educated citizens attain better jobs with higher pay, and the noneconomic benefits include intergenerational benefits, low crime rates, more literate and politically educated citizens, and low maternal and infant mortality rates (Gichuhi 2015). Nevertheless, governments that advocate for student loans (especially Malaysia and China) have not gone wrong in that their students' economic burdens are reduced and their higher education institutions also receive their incomes in a timely fashion. Through this strategic plan of improving their education levels, certain levels of adequacy, equity, and efficiency have been achieved. Kenayathulla and Tengyue (2017) state that the cost of fees and the levels of family income determine which students should benefit from governments loans. Therefore, efficiency and effective mechanisms for governments to sponsor students should be diversified to cater for all regions and all specializations, since each and every field of education contributes to both the economic and social growth of a nation (Ahmad et al. 2012; Gichuhi 2015; Kenayathulla and Tengyue 2017).

Also, the need to have a strong strategic plan for enhancing the efficiency of teaching and learning, research, development, engagement, and internationalization call for government funding so that these institutions can survive the sweeping global waves and their forces. This is because with contributions from fees alone, alumni cannot facilitate their daily operation and development and, the same time, facilitate their strategic vision of competing in the world market (Ahmad et al. 2012a). It is therefore important that funds are given in abundance to consolidate achievements and, at the same time, focus on the bright future to be gained by reforming the performance of these countries in the world market.

In Malaysia, universities come up with comprehensive strategic plans in which elements such as performance, quality, delivery systems, employability, marketability, research and development, and internationalization are embedded. This is done to ensure that innovative human capital is produced to address the general national

strategic plan and development. Meanwhile, this strategy is also inclusive of staff development, both academic and nonacademic, with an agenda of sustainable development in terms of leadership and talent to avoid a vacuum and, at the same time, improve performance (Amran et al. 2014). For a country such as Uganda, there is a need to advise universities to strategically develop models that suit its political, economic, and cultural setting, as its challenges may be very different from those faced in other parts of the world. In addition, the budget and allocation of resources must tally with the economic growth agenda and, at the same time, involve all stakeholders across universities to support their implementation (Ahmad et al. 2012a, b).

Also, some Asian governments have dedicated some of their public institutions as research universities. This has been done to ensure that these institutions come up with innovative ideas and solutions to the many challenges that their citizens face. For instance, in Malaysia, UTM is purely dedicated to ensuring that Malaysia catches up with new trends in research and innovation, especially in the areas of ICT and engineering. The government has achieved this by providing at least 80% of the university's operating budget, and the balance of the budget is supplemented by student fees and other funds secured from grants and scholarships (Ahmad et al. 2012a; Amran et al. 2014)

The way forward for Uganda and other sub-Saharan African countries is to increase the amount of funding (as a percentage of the annual budget and as a percentage of the per capita gross domestic product) to a level at which actual transformation takes place. For this to be effective, however, the country must reduce leakages in terms of false claims, ghost workers, undelivered services, etc. There is need to reduce administrative costs and fund facilities, materials, ICT infrastructure, libraries, and staff development. To get an optimum return on investment, more emphasis should be placed on science, technology, and mathematics (STEM) right from primary education onward.

We must find low-cost ways of doing things, such as having digital libraries instead of physical books and journals, using low-cost technologies for construction, and using renewable energy such as biogas for cooking and generating electricity to operate equipment and lights. To increase access at a lower cost, efforts should be made to use open and distance education models, using readily available mobile telephone technologies and social media.

When it comes to scholarships and student loans, there is a need to improve targeting. Loans and scholarships should be awarded to those who really need them (the poorest of the poor who are willing to serve rural communities upon graduation) and not to those who are well connected. This will require improved transparency in the system.

Public and private sector companies and organizations can be encouraged to contribute to financing higher education by giving them tax waivers and other fiscal incentives. The government could even establish a department to assist the expansionary efforts of Ugandan institutions in Africa by capitalizing on the existing favorable perceptions about Ugandan education. It would be helpful to learn from Malaysia's "twinning program" strategy. Moreover, we need to establish a culture

of endowments by alumni and the general public. For this to take place, however, transparent management is absolutely crucial, and ideally such endowments should be managed by the alumni themselves. The government should give tax-free status to such initiatives.

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